CONTROL DATA CORPORATION

SOFTWARE AVAILABILITY BULLETIN

Distribution List For
CDC CYBER 180/170/70L/6000
SAB No. 697
December 8, 1988

UPDATE TO NOS 2 PACKAGE AND PRODUCT SET VERSION 2.7.1 (Level 716 Release)

A. ABSTRACT

The NOS 2 Package and its product set have been updated to version 2.7.1 release level 716. This release includes support for the 6000, CDC CYBER 70, 170, 180, 990, A and E series systems. NOS does not support the CDC CYBER 930, 962 or 992 series system.

The Order Information Package (OIP No. 109) contains complete ordering instructions for this release. Customers who want level 716 update materials, but have not yet submitted an order, please follow ordering instructions in the enclosed OIP.

The following is a list of the products containing new features in this release.

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B. DESCRIPTION OF RELEASE

1. NOS 2 Package

o 9853 Disk Subsystem

NOS has been extended to support the 9853 (CM3/XMD) disk subsystem as a buffered disk. All NOS file types are supported on the 9853 disk.

The 9853 does not support disk deadstart. Therefore, another disk subsystem must be configured on the mainframe for use as a deadstart device. The 9853 disk subsystem can coexist with the 7x5x/844, 7155/844-4x, 7155/885-1x, and 7165/895 disk subsystems all of which support deadstart, as well as the 887 disk subsystem. 9853 disks may not be shared between mainframes, but they may be configured with other disk subsystems that are shared between mainframes.

The primary maintenance strategy is to utilize in-line diagnostics supplied with the subsystem. All error information concerning the IPI DMA channel and the 9853 disk subsystem is logged in the Binary Maintenance Log (BML). Data path verification is performed to all disks after a level 0 deadstart before users access the system.

The capacity of one standard 9853 disk in a NOS environment is 1151 MB (megabytes). A maximum of 80 dual access drives may be configured on one mainframe. Although not recommended for fault tolerance reasons, a maximum of 160 single access drives can be configured on one mainframe. The sustained transfer rate on a model 860 for one 9853 disk is 3120 Kch/sec.

NOS utilizes the 2K sector size supported by the 9853 disk, which is compatible with the requirements of NOS/VE.

AFFECTED DOCUMENTS

NOS Version 2 Analysis Handbook, publication no. 60459300
NOS Version 2 Operations Handbook, publication no. 60459310
NOS Version 2 Installation Handbook, publication no. 60459320
NOS Version 2 System Programmer's Instant, publication no. 60459370
NOS Version 2 Reference Set, Volume 3, publication no. 60459680

o Scheduler Enhancements

This feature changes NOS in the following ways:

- NOS CPU scheduling is changed so that a range of CPU priorities (rather than a single CPU priority) may be specified for each service class. This allows a site to give preference in CPU scheduling to one service class over another service class without having the more favored service class totally dominate the CPU.

- The maximum number of jobs that can be present in central memory (CM) at one time is increased. This is done by the use of pseudo-control points (PCPs). The PCP provides a way for a job to remain in CM even after relinquishing its control point to a higher priority job.

- The number of central memory storage moves is reduced. This is due to improved memory management strategy.

AFFECTED DOCUMENTS

NOS Version 2 Analysis Handbook, publication no. 60459300
NOS Version 2 Operations Handbook, publication no. 60459310
NOS Version 2 System Programmer's Instant, publication no. 60459370

2. CDCNET

o Async Printer Keyboard Support

CDCNET is enhanced to allow the I/O station operator to enter file transfer control commands (START, STOP, DROP) from the keyboard of async printers.

AFFECTED DOCUMENTS

CDCNET Network Operations, publication no. 60461520
CDCNET Network Configuration and Site Administration, publication no. 60461550
CDCNET Batch Device User Guide, publication no. 60463863

o PM Message Support

Support of PM messages is added to the Async TIP. In addition, the URI, HASP, Mode 4, and 3270 TIPs are modified to all treat PM messages alike. That is, on NOS, they all:

- Cause 'PM ' to precede the message displayed at the I/O station operator's console.
- Allow up to 80 characters of a PM message including 'PM ' to be displayed. (For RBF printers, the 80 character display also includes the device name. For PSU printers, the display limit is 50 characters.)
- Single space before and after the PM message when the PM message action on the Define Batch Device command is PRINT.

AFFECTED DOCUMENTS

CDCNET Network Operations, publication no. 60461520
CDCNET Network Configuration and Site Administration, publication no. 60461550
CDCNET Batch Device User Guide, publication no. 60463863

o Batch Device Configuration Command Enhancements

- The command to configure batch devices provides the ability to select the printing of banner pages and trailer pages independently.
- The command to define printer terminal models provides the ability to have a sequence of data sent to a batch output device during its initialization.
- The command to define async printer terminal models provides the ability to define how the TIP should change print density on the device between 6 and 8 lines per inch.

AFFECTED DOCUMENTS

CDCNET Network Operations, publication no. 60461520
CDCNET Network Configuration and Site Administration, publication no. 60461550
CDCNET Batch Device User Guide, publication no. 60463863

o Device Status Management

The following status management enhancements are for printer devices supported by CDCNET:

- Batch devices can be configured with a status of on or off.

- PostScript-generated error messages are printed on the user's listing.

AFFECTED DOCUMENTS

CDCNET Network Operations, publication no. 60461520
CDCNET Network Configuration and Site Administration, publication no. 60461550
CDCNET Batch Device User Guide, publication no. 60463863

o Xerox Laser Printer Support Via URI

CDCNET supports the transfer of standard text print files to Xerox laser printers with an IBM channel interface. A SPUR Universal Subsystem Adaptor ©USA/DPC (8)® is required to provide the conversion from the URI Data Products interface to the IBM interface on the printer. Printers which have been verified are the CDC 5870 and the Xerox 4050.

AFFECTED DOCUMENTS

CDCNET Network Operations, publication no. 60461520
CDCNET Network Configuration and Site Administration, publication no. 60461550
CDCNET Batch Device User Guide, publication no. 60463863

o NPA Enhancements

Enhancements are added to NPA to support the following features:

- Two new NPA reports are provided to report on TELNET connections. An additional database has been added for these statistics.

- New CRECAR input parameters are added to provide more selectivity in generating reports.

AFFECTED DOCUMENT

CDCNET Network Performance Analyzer Usage, publication no. 60461510

o ANACD Enhancements

ANALYZE_CDCNET_DUMP (ANACD) now supports symbolic addressing on all commands where an address can be specified. New commands are DISPLAY_AUTO_DUMP_TABLE and DISPLAY_BOARD MAP_TABLE.

AFFECTED DOCUMENT

CDCNET Network Analysis, publication no. 60461590

o Maintenance Software Enhancements

The following enhancements are added to the CDCNET maintenance software:

- Short Power-On Diagnostic Sequence

  This feature is implemented with ECO CA49711 to the main processor board in the DI. An option is added to shorten the power-on diagnostic sequence by setting switch 5 on the MPB board to the ON position. Consult with your Control Data customer engineer before selecting short power-on mode. Generally, only the short power-on feature should be used if both the following conditions exist:

  (1) The site is subject to frequent and unexpected power outages.
  (2) Minimum recovery time is critical to the specific application.

- SEND_DIAGNOSTIC_DATA Command

  An online modem test is available for Hayes compatible smart modems to take advantage of programmable loop backs. A new command processor, SEND_DIAGNOSTIC DATA, is added that supports sending configuration commands to intelligent modems.

- New NOS CML Menus

  A set of menus are added to the CMSI procedures delivered in the NOS Concurrent Maintenance Library product for support of CDCNET maintenance activities. These menus are similar to the CML/VE CDCNET menus available on NOS/VE.

AFFECTED DOCUMENT

CDCNET Hardware Installation and Troubleshooting, publication no. 60000348

o TCP/IP Enhancements

- TCP/IP over HDLC

  The gateway DI serving TCP/IP systems is able to be located on a different network solution from the network to which the TCP/IP host or workstation is connected. The TCP/IP protocols are therefore able to be routed and switched over both Ethernet and HDLC networks.

- User TELNET Gateway Enhancements

  The user TELNET is enhanced to allow the user to specify the IP address of the TCP/IP host to which he wants to be connected, making it unnecessary for the site to configure the gateway for each TCP/IP host to which users may connect.

- TCP/IP Subnetting

  Subnetting allows a large network consisting of many subnetworks to be configured using a single IP network number. The site defines subnetwork numbers locally, instead of having them assigned by another authority. With subnetting, routing traffic within an IP network does not pass through external networks.

- Default Route

  The TCP/IP software can be configured with a default route. This allows connectivity through gateway nodes without propagating the gateway node routing information throughout the connected networks.

AFFECTED DOCUMENTS

CDCNET Network Configuration and Site Administration, publication no. 60461550
CDCNET TCP/IP Usage, publication no. 60000214

o Multinational Character Set Support

CDCNET 1.4 L716 supports the following:

- Extended ASCII code set support

  This support is provided by the Async, X.25 Async, and URI TIPs which includes the following:

  - Support of 8-bit ASCII character codes for interactive and batch devices.
  - Support of ASCII, ASCII48, ASCII64, ASCII95, ASCII128, and ASCII256 for interactive and batch devices.

- Control Character replacement

  This support is provided by the Async, X.25 Async, and URI TIPs. This allows for interactive and batch devices to be configured so that CDCNET deletes certain control codes or replace certain control codes with new character codes when processing output data.

- Site-defined code set support

  This support is provided by the Async, X.25 Async, URI, HASP, and Bisync 3270 TIPs for interactive and batch output and by the Hasp TIP for batch input.

  This allows you to change the standard CDCNET code set defined for a device, by defining a site-specific code set. The code set translation table defined is then used in the ASCII to device output character translation or in the device to ASCII input character translation.

- LOAD_FILE Command

  LOAD_FILE is a new CDCNET configuration command which allows loading certain types of configuration files into the memory of DIs. Loading of passthrough terminal user procedures (TUPs) is recommended because they are used frequently. Network traffic is reduced when these procedures are loaded and passthrough configuration is performed more quickly and reliably. Most importantly, passthrough configuration is not dependent on the availability of a CYBER host. File types of EXCEPTION, USER_PROCEDURE, and TERMINAL_PROCEDURE can be loaded.

AFFECTED DOCUMENTS

CDCNET Network Configuration and Site Administration, publication no. 60461550
CDCNET Terminal Interface, publication no. 60463850

o PostScript Laser Printer Support

CDCNET support of PostScript laser printers as asynchronous batch output devices on NOS is enhanced to provide the following features:

- Postscript processing can be performed for user-defined printer models

- Alternate forms sizes are now supported

This is verified with the Apple Laserwriter models M0156 and M6000 using PostScript version 23.0 and a QMS 810 PostScript laser printer.

AFFECTED DOCUMENTS

CDCNET Network Operations, publication no. 60461520
CDCNET Network Configuration and Site Administration, publication no. 60461550
CDCNET Batch Device User Guide, publication no. 60463863

o Terminal User Interface Enhancements

- CREC Wait

  This allows a user to create a connection to a service which is not available and have CDCNET monitor its availability. Once the service becomes available, CDCNET establishes a connection to the service.

- Terminal User Line Disconnect

  This allows a user to force CDCNET to drop all connections from a terminal and disconnect the line. This feature can only be used with Async and X.25 Async terminals. This disconnect is provided via the DELETE_CONNECTION command specifying a connection name of $NET.

AFFECTED DOCUMENTS

CDCNET Terminal Interface Usage, publication no. 60463850
CDCNET Configuration and Site Administration, publication no. 60461550

o PMM Usage Enhancements

PMM (Private Memory Module) consists of 128K bytes of memory which is privately accessed by the MPB (main processor board). PMM improves the performance of the MPB processor since memory access is without wait states. Addition of PMM results in as much as a 50% processor performance gain depending on the system configuration and typical workload.

The performance gain obtained with PMM is improved with this release. This is accomplished by a DI dynamically determining how best to use PMM based on its own configuration.

C. PUBLICATIONS

Publications and revision packets shown in table 1 contain information pertaining to this release or have been revised since the last release. This table may include both printed and online manuals. Printed manuals are ordered individually through Literature Distribution Services (See table 1). Online manuals are ordered as a set using the Order Information Package (OIP). Table 2 contains the microfiche source listing for NOS V2.6.1 L700.

D. CONFIGURATION MANAGEMENT

Before installing the NOS V2.7.1 L716 software system, ask the Engineering Services representative at your site to confirm that all equipment is at the required FCO level. In particular, ensure that the mainframe is at the appropriate index level. This means that all FCOs listed on the mainframe Field Change Announcement (FCA) at lower index levels should be installed plus any FCOs necessary to bring the mainframe to the required index level. (The mainframe FCA is similar to the system FCAs accompanying your software shipment, but is provided directly to CDC Field Service personnel.)

Additional configuration management data is contained on the System Field Change Announcement sheets accompanying your software shipment. There is one sheet for each CYBER series mainframe model with a guide to understanding the data printed on the reverse side. These System Field Change Announcements are updated with each subsequent release of system software.

Also included with your software shipment is a summary of applications available under NOS. These are tabulated by NOS release levels. As new SABs are released for applications, the Field Availability Summary (FAS) of applications under NOS will be updated and mailed with the application SAB.

The NOS V2.7.1 L716 system is supported in environments containing the following peripheral components:

Hardware Component	Release Level
7054/844 (BCS-Half Track)	MA710-D13*
7021/66x (FIRM66x)	MB434-D14*
7155/885/844-4x (FMD-HT/FT)	MA721-D12*
7154/844 (BCF-Full Track)	MA401-D08*
7155-401/885-42/885-1x/844-4x (PHD-HT/FT)	MA722-D03*
7221/639 (CW63x)	MB465-D04*
7255-01/834/836 (ISD I/II)	MA462-D06*
7165/895 (MA464)	MA464-D10*
5870 (CCC5870)	MA466-D03*
7990 (CCC7990)	MB466-D03*
380-170 (NAD)	MG401-D05
CM1 Controlware (CMD)	MH422-D07*
CM2 Controlware (CM2)	MH424-D03*
FSC Tape	MB401-D04*
FSC Disk Firmware (ADP)	MA454-D04*
698-xx CMTS	MB467-D02*
CYBER Initialization Package (CIP)	CIP V10 L716

*Contained on CIP V10 L716

E. SUPPORT INFORMATION

The information in this section applies to system software: the operating system, the product set including compilers and data management products, and the communication products. Critical support or critical problem support, as used here, means providing corrections that apply to the release level being used at the site experiencing the problem or providing a satisfactory workaround.

1. Current Release, Critical Support. Support for any critical problems encountered in the NOS V2.7.1 L716 software system will be provided for one year from its release date.

2. Prior Release, Critical Support. Under Control Data's software support policy, critical problem support will be provided for the following levels of NOS 2 software systems at least until the dates shown below:

NOS 2 VERSION	RELEASE LEVEL	CRITICAL SUPPORT END DATE
2.6.1	700	Apr 1989
2.6.1	708	Apr 1989
2.6.1	710	Apr 1989
2.7.1	716	Dec 1989

3. Dual state, Critical Support. See the NOS/VE V1.4.1 L716 Software Release Bulletin (SMD 131923) for dual state system support timeframes.

4. Non-Critical Support. Urgent, serious and minor PSRs will continue to be processed in the context of the latest released software system, and/or in the next release.

F. ORDERING INFORMATION

These update materials are now available and may be ordered by following the ordering instructions detailed in the enclosed Order Information Package (OIP No. 109).

TABLE 1. PUBLICATIONS PERTAINING TO THIS RELEASE

Publication Name	Publication Number	Complete Manual Price	Latest Publication	Order From
CDCNET TCP/IP Usage	60000214C	$ 12.00	Packet	LDS
CDCNET Hardware Installation and Troubleshooting	60000348A	36.00	Manual	LDS
CYBER Initialization Package (CIP) Reference Manual	60457180M	41.00	Packet	LDS
NOS Version 2 Analysis Handbook	60459300M	108.00	Manual	LDS
NOS Version 2 Operations Handbook	60459310M	42.00	Packet	LDS
NOS Version 2 Installation Handbook	60459320L	39.00	Manual	LDS
TAF 1 Reference Manual	60459500D	20.00	Manual	LDS
NOS Version 2 Reference Set, Volume 3, System Commands	60459680L	75.00	Packet	LDS
CDCNET Product Description	60460590C	23.00	Manual	LDS
CDCNET Network Performance Analyzer	60461510E	17.00	Manual	LDS
CDCNET Network Operations	60461520F	59.00	Manual	LDS
CDCNET Configuration and Site Administration Guide	60461550F	73.00	Manual	LDS
CDCNET Network Analysis	60461590E	25.00	Manual	LDS
CDCNET Terminal Interface	60463850E	39.00	Manual	LDS
CDCNET Batch Device User Guide	60463863E	13.00	Packet	LDS
NAM Network Definition Language Reference Manual	60480000T	29.00	Packet	LDS
HELPME Online Utility	Online	---	New	OIP
Migration from NOS to NOS/VE	Online	---	New	OIP
CDCNET Access Guide	Online	---	New	OIP
CDCNET Diagnostic Messages	Online	---	New	OIP

NOTES:

1. For each product ordered, the standard package will include one copy of each manual containing information for that release.

2. To receive the entire document plus current revision packets, indicate the publication number and highest revision level shown. The price is the same as the price for the base document (the price for the revision packet is included in the base document price).

3. Document packet prices are available from Literature Distribution Services. To receive a revision packet only, indicate this on the order.

4. Document prices for customers not in the continental United States of America are established by local agreements and must be obtained from the local sales office. International orders for documentation should be processed through Control Data's International sales office or documentation librarian.

5. LDS: Control Data Corporation
Literature Distribution Services
World Distribution Center
308 North Dale Street
St. Paul, Minnesota 55103

TABLE 2. MICROFICHE SOURCE LISTINGS

Publication Name	Document Number	Microfiche Price	Order From
Level 700			
CDCNET Base	SMD131830	$2.00	SMD
CDCNET X.29 PAD Server	SMD131831	$2.00	SMD
CDCNET Async Terminal Passthrough	SMD131832	$2.00	SMD
CDCNET 3270 BSC	SMD131833	$2.00	SMD
CDCNET Mode 4A/4C	SMD131834	$2.00	SMD
CDCNET TCP/IP/FTP	SMD131835	$2.00	SMD
Dual Subsystem	SMD131925	$2.00	SMD
FSE Subsystem	SMD131926	$2.00	SMD
High Speed I/O	SMD131927	$2.00	SMD
IAF Subsystem	SMD131928	$2.00	SMD
Multi-Mainframe	SMD131929	$2.00	SMD
MSE Subsystem	SMD131930	$2.00	SMD
NIP5870	SMD131931	$2.00	SMD
NOS System	SMD131932	$2.00	SMD
NOSB	SMD131933	$2.00	SMD
TAF Subsystem	SMD131934	$2.00	SMD
TDU	SMD131935	$2.00	SMD
Termlib	SMD131936	$2.00	SMD
Maintenance Tools	SMD131937	$2.00	SMD
Tracer	SMD131938	$2.00	SMD
XEDIT	SMD131939	$2.00	SMD

NOTES:

1. Microfiched publications are on 4" x 6" microfiche in 42:1 format. Prices include shipping and handling charges and are subject to change without notice. These documents may only be ordered by customers licensed for the corresponding products.

2. Price listed apply only to customers in the continental United States of America. Document prices for other customers are established by local agreements and must be processed through the Control Data's International sales office or documentation librarian.

3. SMD: Control Data Corporation
Software Manufacturing and Distribution
ARH230
4201 North Lexington Avenue
St. Paul, Minnesota 55126-6198